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FAIR VALUE FOR RATE PURPOSES.

IT has frequently been stated that there can be no rule or formula for the determination of fair value for rate purposes. Each case must be considered on its own merits, and such result or value arrived at as may be "just and right in each case." "It is not a matter of formulas, but there must be a reasonable judgment having its basis in a proper consideration of all relevant facts."¹ "We take it that any value is a fair value which fair and reasonable men would say ought to be attached to the property, under all the circumstances of the particular case, for the purpose of measuring the return which the public should pay to the owner."²

The Supreme Court has gone no further than to mention some of the elements to be considered in determining fair value. In *Smyth v. Ames*³ Justice Harlan points out that "the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration and are to be given such weight as is just and right in each case." The court, however, is careful to add that there may be other elements besides those enumerated that should be taken into consideration, and gives no indication as to how these various factors are to be combined to produce the final result. It does not indicate the relative weight to be attached to the various elements, nor does it indicate that in a particular case any weight need attach to certain of the elements.

Those who realize the complexity of the problem are agreed that it is fortunate that the courts, and particularly the United States Supreme Court, has not attempted as yet a more illuminating definition of "fair value." It is recognized that the entire problem is in a developmental stage, and that there is danger of creating

¹ The Minnesota Rate Cases, 230 U. S. 352, 434 (June 9, 1913).

² Application for approval of sale of Berlin Electric Light Company, Dockets No. 130 and 131, decided August 20, 1913, New Hampshire Public Service Commission.

³ 169 U. S. 466, 546, 18 Sup. Ct. 418 (March 7, 1898).

precedents that may compromise future action when the entire problem has been more fully disclosed.

This attitude, however, while proper under the circumstances, should not be considered final. While fair value can never be a matter of mathematical formula, its normal content should be defined. Public interest demands that the relation between the public utility and the public should be put on a more permanent and dependable basis.

Investors in putting their money into public utility enterprises are entitled to know whether, in case the utility is appropriately located and normally successful, it will be permitted to earn a return on the actual and necessary investment, or upon the cost of reproduction, or upon the market or exchange value of the property, or upon a combination of these or other factors. Any arrangement might conceivably be fair to the company and fair to the public provided it were known in advance, so that reciprocal relations between risks involved and returns secured might be established, and proper methods of accounting for depreciation and appreciation instituted. For the future at least it is clearly essential that some one standard should be adopted as the normal and controlling standard in determining fair value. As to the past, the situation, while more complicated, still points to the desirability of definitely choosing some standard.

In considering fair value for rate purposes it is important to bear in mind that the determination of fair value is a part of the process of determining a reasonable rate of charge. The content of fair value may therefore depend largely on our conception of what constitutes rate reasonableness. It will aid to a clearer determination of this intricate problem if for the moment we forget "fair value" and concentrate our attention on the fundamentals of a reasonable rate of charge. By "reasonable rate" as here used we mean the reasonableness of the rate schedule as a whole, and not the adjustment of the various specific rates that go to make up the complete rate schedule. It is the total price or compensation collected from the public for its entire service, rather than the price for any particular service or class of services. A reasonable rate of charge in this sense of a reasonable rate schedule is a rate that gives the company reasonable compensation for the entire service which it renders the public.

Reasonable compensation must be reasonable to the public. It cannot be more than the service is fairly worth to the users, or more than they can be justly called upon to pay under all the circumstances of the case. Reasonable compensation should, moreover, constitute a fair return to the company for the service rendered. It must be just to the public and should be just to the company; but if it cannot be just to both it must in any event be just to the public. Normally there is no conflict, for a rate that is just to the company is also just to the public. It is for the most part only in cases where there has been poor judgment in the establishment of an enterprise, or changed conditions have rendered it inappropriate, that a rate which offers only a fair compensation to the company is unjust to the public. For the normal successful public utility enterprise the reasonable rate of charge is the rate that affords the company a reasonable, and no more than reasonable, compensation for its entire service to the public.

What, then, is reasonable compensation in the case of the appropriate and normally successful public utility enterprises? Reasonable compensation is here equivalent to the normal cost of production. What other basis can there be for the determination of a fair price in the case of a virtual monopoly?

If a commodity can be freely and quickly produced, its market price will follow quite closely its cost of production. This must be so, because under the assumed conditions there could be no reason for paying more than the cost of production.

If a commodity may be freely produced, but only by specially trained workmen, a large fixed investment, and great business risks, the cost of production will still in the long run *tend* to limit market price. It is clear that the production of a particular commodity will not be permanently carried on unless the price received covers all the costs of production. Under free competition it is also clear that a price higher than that necessary to cover special risk, interest, profits, and operating expenses will bring new capital into the industry, and thus bring the price down to the cost of production. For a freely produced commodity, therefore, a price that does not conform to cost of production is not a stable or normal price. In a static society, with perfectly free competition the market price would conform to cost of production. In our present highly dynamic society, with many actual limitations upon

perfect freedom of competition, market price and cost of production are often very far apart. Economists have used the term "normal price" to indicate in the case of a freely produced commodity that price that corresponds to cost of production. It is the normal price, because it is the price toward which market prices tend; it is the price that under assumed conditions would be stable.

The above presupposes competitive conditions. In the case of unregulated virtual monopoly the force that tends to limit prices charged to the cost of production is lacking. This creates the necessity for public regulation of the rates of charge of public service companies. The aim of public regulation is to accomplish what in other industries is assumed to be accomplished automatically by free competition, that is, to limit the price charged to the normal cost of production. In the case of authorized and regulated monopoly, ordinarily the reasonable rate of charge will correspond exactly to the economist's conception of normal price. The reasonable rate is ordinarily the one fixed by the normal cost of production. It is fixed by normal operating expenses plus a normal rate of return on a normal capital cost. Normal cost is ordinarily the determining factor in fixing fair, reasonable, or normal prices in the case of a regulated monopoly.

There is no reason why in the case of a virtual monopoly the public should be required to pay more than the normal cost of production, and sound reason why in the long run the public cannot pay less. Normal cost of production is the amount which in the long run it is necessary to pay to secure the utilities demanded by the public. It is the amount that will secure an equilibrium between demand and supply.

In the case of a commodity requiring no capital outlay the normal cost of production is easily determined. It is the present normal cost of the labor and materials entering into its production. Cost consists merely of "operating expenses," and is not complicated by the question of capital cost, and interest and profits thereon.

In the case, however, of a commodity requiring a large fixed investment, the determination of a normal cost of production is a complex process, in the working out of which there is room for a wide divergence of opinion. To the normal cost of labor and materials there must be added a fair estimate for depreciation and a fair return on capital cost. The normal cost of labor and materials

is complicated by the necessity of including provision for maintenance, repairs, and depreciation. The determination of a normal return on a normal capital cost requires a determination of two very difficult and complicated problems: (1) What is the amount of the normal capital cost, and (2) what constitutes a normal return on such amount.

Normal capital cost as applied to a new enterprise is a comparatively simple concept. But what is it as applied to a long established enterprise — to a water supply plant, a gas plant, or a railroad system? Is it normal cost at the time originally installed or last renewed, or, on the other hand, is it the present cost of reproduction? Is it actual cost or reproduction cost? We start with the premise that the reasonable rate of charge is to be determined by the fair cost of production. The point at issue between actual cost and reproduction cost is really whether by cost of production we mean cost at a particular moment or cost averaged over a period of years. In favor of present-moment cost it is asserted that what the public is entitled to is service at a rate of charge sufficient only to pay a fair return, under present investment conditions, upon the capital cost that would be required at present to furnish this service; and, conversely, what the company is entitled to receive is a fair return, under present investment conditions, on the capital cost that it or another company would have to expend at present in order to provide the service. A rate of charge measured on this basis is said to correspond to the present economic cost of the service.

The fallacy in this argument is due to a failure to realize the effect on cost determination of a fixed investment of capital. If a public service could be supplied without a fixed investment it would be true that cost of production could be determined without reference to the past. But these utilities cannot be supplied without a large capital outlay that cannot be withdrawn at will and upon which a certain risk has been assumed in anticipation of an assumed probable return. As the utility can be supplied only in this way, the actual cost of production cannot be determined without reference to these actual conditions. Cost of production determined by the reproduction method is largely hypothetical. It is not based on the actual conditions that limit the production of the utility.

Take the railroad industry. Some billions of dollars have been permanently devoted to this great public service. This capital cannot be withdrawn. The railroad is a fixture. It has created and molded the entire industrial and social development. The location of industries, population, cities, has for the most part been controlled by this factor. It is utterly impossible to conceive of our present social and industrial organization without the railroad. The reproduction cost theory as applied to such an institution is particularly fanciful. How can real cost of transportation be held to change from year to year with the changing reproduction cost of the railroad right of way and terminals? If railroads were in fact entirely reconstructed each year, there would be reason in this method of cost determination. But they are not and cannot be constructed and operated on any such theory. The real cost of transportation can only be determined by recognizing the only process by which transportation service can be supplied, that is, by devoting capital permanently to the enterprise.

The determination of a normal capital cost is one step in the process of determining a normal price, and this normal price is the amount which in the long run it is necessary to pay to secure the utilities demanded by the public. It is the amount which constitutes an adequate inducement for investment. Starting with the necessary investment as a base, the investor will estimate all the risks and hazards of the business, of every kind and nature, and against this will place all the possible chances of profit. The possible rate of return adequate to induce investment is naturally and necessarily a percentage on the actual cost. From the standpoint of the investor, a rate of profit based on any amount that is less than the actual cost is in excess of the actual rate of profit, and a rate of profit based on any amount that is greater than the actual cost is less than the actual rate of profit.

Assume, for example, that a possible annual return of 7 per cent on the actual outlay is reasonable and necessary to secure the establishment of a given public utility. If, however, the annual return is to be based not on actual outlay but on estimated reproduction cost in each year, 7 per cent will be more or less than a reasonable return in proportion as the chances favor an increase or a decrease in reproduction cost. If costs of land, labor, and materials are advancing, and all indications point to a continuance

of such increase, a return of 7 per cent on such increasing cost is more than is reasonable and necessary to secure the establishment of the given enterprise. If on the other hand all indications point to a continuous fall in the cost of land, labor, and materials, the prospect of a return of 7 per cent on such decreasing cost would not be adequate to secure the establishment of the enterprise. To furnish an adequate inducement, either the probable rate of return would have to be increased, or the cost of reproduction standard of determining capital cost would have to be abandoned.

The fair rate of return could be altered so as in a measure to offset the appreciation or depreciation of the base to which such rate of return is applied. With declining prices the risk of depreciation in reproduction cost would be offset by an increase in rate of return, and with advancing prices the probability of appreciation would be offset by a decrease in the rate of return. This, however, is but a poor method of accomplishing what can be more fairly and logically effected by directly basing the rate of return on actual capital cost. Any method that is permanently fair to both parties must get back to actual capital cost as the base for actual as distinct from nominal profits.

It is a fair assumption that, in general, investors in establishing public utilities have looked to a fair return on their actual investment to compensate them for their outlay, and have not taken seriously into account any appreciation or depreciation in the value of land or in the price of labor and materials entering into the reproduction cost of structures and equipment. They have necessarily assumed that they would be able and would be permitted to receive for their service an amount equal to their actual cost of production, *i. e.*, operating expenses, depreciation, and interest and profits on their actual capital outlay.

The normal actual capital cost as a basis for rate determination, moreover, has a distinct advantage from the standpoint of public policy. It is desirable that rate schedules should have stability and should not fluctuate with the price of iron pipe or copper wire or with real-estate activity or reactions. A utility is not established for the purpose of speculating in copper wire or iron pipe or land. It must, however, in furnishing its service invest its money permanently in these things. The utility should not be expected to assume the risks of fluctuations in the price of the land and

materials it uses. The public interest is best subserved and the cost of production is lowered by reducing the risks incident to public utility enterprises. The tendency of modern public service regulation is to establish more definite and equitable relations between the public and the company. These more definite relations mean decreased risk, and decreased risk means decreased cost of production.

The public utility renders a continuous service, and in doing so requires a permanent fixed capital. Both the plant and the business are a gradual growth. This essential continuity of growth and service is the fact that seems to be lost sight of in present-moment reproduction methods of determining cost of production. The service and its present cost are the result of a complex interplay of factors starting with the initiation of the enterprise. Such cost is as much the result of past life and growth as it is of present conditions. Investment, depreciation, operating costs, risk, are all bound up in the past growth and development of the existing utility.

As justifying the reproduction method it may be argued that the public is always entitled to secure service under present conditions as to cost of production. It is entitled to secure service at a rate of charge sufficient only to cover cost of operation, interest, and profits of a substitute plant of the most modern approved design, capable of performing the same service as the existing plant. The company assumes the risk and enjoys the profit, if any, incident to this arrangement. This method involves a reproduction of the service rather than a reproduction of the plant. If the old plant were wiped out, what would it cost at present to construct and operate a plant capable of performing the service now performed by the old plant? In the case of a water plant, perhaps an entirely new source of supply would be used and the distribution system radically changed; in the case of a gas plant, a different process of production employed and a few gas-holders substituted for many small ones; in the case of an electric plant, larger units of production employed; in the case of a railroad, there might be a radical relocation and realignment of roadbed and important changes in the method of construction, leading to great economies in operating cost. It has been stated that "if our railways were to be built anew, in the light of our present knowledge and

with our present traffic offerings and financial resources, vast changes would be made in the character of construction.”⁴

As thus stated, the reproduction method has so many difficulties that it is practically never employed. The reproduction of the service involves not only the determination of the cost of the most efficient substitute plant, but the determination of the present cost of reproducing the business, the proper allowance under present conditions for interest and profit, and the operating costs for the substitute plant. In most cases it is exceedingly difficult and expensive to determine the design of an equally efficient substitute plant. In the case of a railroad, for example, the cost of determining a substitute location and of estimating the operating costs thereon would be so great as to render it entirely impractical as a factor in rate regulation. It would require a careful survey of various available locations, and estimates of construction and operating costs. The engineering costs of such survey and estimates would be enormous.

The cost of reproduction in practice, therefore, instead of meaning the cost of a substitute plant of the most modern approved design, capable of performing the same service as the existing plant, has come to mean the cost of a substantially identical reproduction of the existing plant. This is the usual method. It involves, however, a partial abandonment of the reproduction of the service theory, and a somewhat imperfect recognition of the fact that cost of production is necessarily related to the past as well as to the present and future. It constitutes an imperfect recognition of the necessary continuity in the life of the plant and its service.

By a further modification of the cost of reproduction method, cost of reproduction is made to mean not the cost at present prices of land, labor, and materials of reproducing a substantially identical plant under *present conditions*, but the cost at present prices of land, labor, and materials of reproducing a substantially identical plant under the *actual conditions* under which the existing plant was originally constructed. Under this method expenditures actually incurred in the development of the present property are fully allowed for, even though they would not be met with in the reproduction of an identical substitute plant. On the other hand,

⁴ J. E. Willoughby, in "Proceedings of American Society of Civil Engineers," January, 1911, page 119.

certain expenditures that have not been incurred in the development of the existing property, but would be incurred in the reproduction of the existing property, are excluded. The following is a statement of expenditures that would be included under this interpretation of the reproduction method. "If trees were cleared, then he [the appraiser] must allow for the cost of clearing, although not a tree may now be standing. If streets were graded, then that grading must be estimated, though to-day the entire city is as level as a floor. If quicksand was encountered in laying a pipe-line, then the added cost of excavating it must be allowed, even though subsequent works have drained the line so that it no longer has a yard of quicksand. If money was spent to educate the public to the use of the commodity sold by the corporation, then that money is a development expense which must be allowed, even though the expense would not now be incurred by a new corporation of like character."⁵ Pavement over mains laid at the expense of the city, on the other hand, is an example of a reproduction cost that would not be included under the modified rule above mentioned.

The consideration under the reproduction method of piecemeal construction depends upon whether the modified view of cost of reproduction above referred to is adopted. Under a strict application of the reproduction method there would be no occasion for the application of piecemeal methods. The entire property would be reconstructed by the quickest and most economical method. The actual cost of constructing gas mains has doubtless increased where from time to time additional mains have been laid in the same street to meet increased demands. In the laying of telephone conduits and cables by the piecemeal method additional cost is also incurred. On the other hand, certain overhead charges, such as organization, engineering, and interest during construction, may be lower where the property is constructed by the piecemeal process. Various authorities in using the reproduction method have considered it proper to allow for piecemeal construction. To this extent they have abandoned the strict reproduction method.

A strict application of the reproduction method means that interest and profits shall be determined by present conditions. If the existing property were wiped out, upon what terms could

⁵ Discussion by Halbert P. Gillette in "Transactions of American Society of Civil Engineers," 1911, vol. 73, p. 382.

capital be induced to invest in a similar property under existing conditions as to interest and risk? This theory disregards entirely the risk assumed when the existing enterprise was started and when the successive additions to investment were made. Most authorities recognize, however, that a fair return on investment cannot be determined in this way. Consideration must necessarily be given to initial risks and past earnings.

The reproduction method does not fit in with depreciation and accounting methods. The annual allowance for depreciation under approved accounting methods is not the amount required to replace the existing unit, but the amount required to write off the cost of the existing unit when it is necessary to replace it. Under approved methods the actual cost of a car when replaced is deducted from the capital account, and the cost of the new car is added to the capital account. An allowance for depreciation estimated on reproduction cost is consequently inaccurate in proportion as the reproduction cost differs from the actual cost. As long as the science of accounts is predicated on actual cost it is inconsistent and confusing in any proceeding to determine cost of production, to base either the accrued depreciation or the annual allowance for depreciation, on reproduction rather than actual cost.

The question of actual cost has been usually dismissed in connection with valuation cases and discussions by the simple statement that inasmuch as its determination was entirely impracticable any consideration of the subject must be purely academic. This, it seems, has been largely the result of a somewhat confused conception of actual cost. Actual cost properly considered may in a great majority of cases be determined with much greater accuracy than reproduction cost. The term "actual cost" may possibly be taken in three senses: (1) book cost; (2) the first cost of the original units; (3) the first cost of the identical units now in use. The confusion has arisen from identification of actual cost with book cost or first cost of original units, or both. Properly speaking, actual cost is the first cost of the identical units now in use. In the past both the terms "actual cost" and "original cost" have been used, the term "original cost" being more frequently employed. The term "actual cost" should be substituted, as the term "original cost" appears to mean the first cost of the original units.

Book cost would be the same as actual cost, *i. e.*, the first cost

of the identical units now in use, assuming that approved accounting principles had been strictly applied from the initiation of the enterprise. Correct accounting principles are, however, of comparatively recent acceptance and application. Book costs as actually developed often include discount on securities issued, exorbitant profits to promoters, cost of replacing wornout or superseded property, dividends paid out of capital and money sunk in unsuccessful experiments. On the other hand, book cost may exclude various actual costs, such as improvements and betterments constructed out of earnings, and overhead construction charges included in operating expenses.

Original cost, or the first cost of the original units, is extremely difficult of ascertainment in the case of all the older enterprises. Accounts and records are lacking, and even if at hand would not necessarily be illuminating, inasmuch as the accounting principles and methods applied are not in evidence. A particular unit may have been replaced many times; there may be no record of the time when it was originally installed or of the character and quality of the unit when installed. To the first cost of the original unit there would be added or deducted at the time of successive replacements the proportion of the cost of the new unit represented by any increase or diminution in the capacity of such unit. When a street car with a carrying capacity of 24 is replaced by one having a carrying capacity of 30, one-fifth of the cost of the new car would be added to capital cost. When in turn the 30 passenger car came to be replaced by a 40 passenger car, one-fourth of the cost of such new car would be added to capital cost. Thus the determination of original cost in this sense would require a complete knowledge of the physical and accounting history of the enterprise.

If actual cost be taken in the sense of original cost or first cost of the original unit, it may be ruled out as impracticable of ascertainment in the majority of cases. Under approved accounting principles, however, actual cost is not the first cost of the original unit, but the first cost of the identical unit now in use. Under approved accounting methods, when a given unit is replaced, the cost of the replaced unit is deducted from the capital account and the cost of the new unit is added to capital account. Thus the true book cost corresponds with the first cost of the identical unit now in use. This greatly simplifies the problem of determining actual cost.

Assuming that existing accounts and records may be only partially relied upon, an estimate of actual cost can be ascertained by much the same methods and with greater accuracy than an estimate of reproduction cost. The first essential in either case is a complete inventory of property units in use. A second requirement in both cases is the determination of the approximate time at which each such unit was installed. This information is essential under the reproduction method in order to determine the age and accrued depreciation of each unit or class of units. It is essential under the actual cost method in order that unit costs varying with the period of purchase may be applied. Records are available showing for any period the prevailing prices of labor and materials entering into construction costs. From such records, supplemented in many cases by fragmentary data obtainable from the books of the company, it is possible to apply unit costs. In the electrical industries particularly, a large part of the property is short-lived, so that even if records are at hand for the past five or ten years, only data that will fix within narrow limits the actual cost of a large proportion of the existing property can be ascertained. The actual cost of land, even in the case of old enterprises, can often be obtained from the company's records. If such records are entirely lacking, the value of the land at the time of its purchase may be estimated from tax assessments and records of purchases and sales at the time. Such an estimate will, in most cases, come nearer to the true purchase price than present estimates of reproduction cost of the land will come to the true reproduction cost. A succinct statement of the method to be employed by the engineer in estimating actual cost is contained in a recent book by Hammond V. Hayes, entitled "Public Utilities, their Cost New and Depreciation" (at page 108):

"By far the larger part of these difficulties is removed if the original cost is determined in substantially the same manner as was the replacement cost. An inventory is prepared showing all plant units now in useful service. Such an inventory is identical with that required for ascertaining replacement cost. The age of each unit is ascertained and entered in the inventory. As will be explained later, this figure for age is necessary for a determination of the loss in value of the investment arising from depreciation. From this age figure it is possible to find how many units of each class of elements were constructed in each year in

the past. The engineer and an accountant familiar with the company's records can ascertain the unit costs of all elements for each year in the past. The sum of the products of the numbers of units constructed each year by the unit costs for that year will give the original cost. Overhead charges can be found for each year and applied to the cost of construction each year in a manner similar in all respects to that described under replacement cost. Thus it is seen that the method of determining original cost is practically the same as replacement cost, except that in the case of the original cost there are several unit costs, one for each year in the past, for each element, whereas for replacement cost there is but one unit cost applicable to all units of the same kind."

If public service industries were not already long established and our problem was that of devising a general policy that would serve as an adequate but not excessive inducement to obtain the establishment of the desired services, it seems clear that the actual and necessary outlay would naturally be taken as the normal capital cost upon which a fair rate of return would be allowed. The future cost of production of the service in a particular community would therefore depend somewhat on the prices of land, labor, and materials prevailing at the time the particular plant was established or last renewed. This seems natural and fair. The normal price of a virtual monopoly is necessarily something of an average. It cannot be determined wholly without reference either to past or future. The normal price is not the present moment hypothetical cost of production, assuming a reproduction at the present moment of the existing plant. Utilities requiring a large fixed investment cannot be permanently carried on on this basis, with justice to the investor and economy to the public.

But our public service industries have for the most part been long established. A vested right to increments, especially in land values, is claimed. In the past, theories of public control have been but vaguely formulated and very imperfectly applied. Consequently many believe that the cost of reproduction method of determining capital cost or fair value is essential as a starting point, but for the future, fluctuations in the price of land, labor, and materials should result neither in an unearned increment nor an unmerited loss to the investor.

What is equitable and just as regards the past depends upon the nature of the implied understanding between the public utility and

the public at the time these investments were made. It is probably correct to say that no more definite understanding could have been implied than that the service would be supplied at the cost of production. Cost of production here means the actual cost of producing the service, including interest and normal profit, but excluding monopoly gains. Whether interest and normal profit were to be based on actual cost or on cost of reproduction was probably seldom considered, and there has certainly been no authoritative statement that could justify a conclusion that either the one or the other method would prevail.

If it were generally true that public utility properties could now be reproduced at less than actual cost, the argument for the acceptance of actual cost as a normal standard for fair value would appeal very strongly to the public utility interests. As, however, prices of land, labor, and material have in general advanced enormously since 1896, most utility enterprises can only be reproduced to-day at a cost considerably in excess of the actual necessary cost. It is natural, therefore, that public utility interests should incline strongly toward the reproduction method.

It may be argued that it has, at least for a considerable number of years, been recognized by the highest courts that the company is entitled to earn a fair return on the fair value of its property. The courts have used the terms "value," "present value," "fair value," "reasonable value," and "just value" in relation to the amount upon which the fair rate of return should be based. That they have not usually had current exchange value in mind is clearly apparent from the fact that the chief weight in determining value has been given to cost, either actual cost or reproduction cost. They have usually used "value" in the sense of "normal value," as that term is understood by economists, *i. e.*, a value corresponding to the cost of production. It seems at first thought that reproduction cost corresponds more nearly to any proper use of the term "value" than does actual cost. It does have a closer relation to exchange value, but not necessarily a closer relation to normal value or cost of production, which is the only sense in which the term "value" can be properly used in this connection.

It may be argued, nevertheless, that constant use of the term "value" in this connection has, whether rightly or not, produced the impression in the minds of investors and others that utilities

would be allowed to earn upon a value represented by their reproduction cost. This argument seems particularly forceful in regard to land. It is argued that as the company owns land and could, if it so desired, dispose of it and pocket the proceeds, it amounts to confiscation not to permit it to earn on the present market value of the land. This statement needs qualification. In the first place, most land that is used for public utility purposes is improved to such an extent that if sold for other uses the loss due to the scrapping of the improvements would offset the increase of selling price over cost price. If a railroad right of way were sold for farm purposes, the loss due to the scrapping of the roadbed would more than offset any increment in the selling price of the land. In case the company desired to go out of business it could, of course, sell its entire property to any purchaser, but such purchaser would necessarily base his purchase price on probable earnings under the existing scheme of regulation. If, however, the company decided to abandon its franchise, scrap its plant, and sell its land for what it would bring for other uses, it could of course realize on the increment in the value of the land, but such increment would be far from sufficient to offset the loss in the value of the plant and equipment as based on actual cost.

But the determination of fair value is only one step in the process of determining a reasonable rate of charge. We have already found that a reasonable rate of charge for an appropriate and normally successful utility enterprise is the equivalent of the normal cost of production. The normal cost of production is the amount which in the long run it is necessary to pay to secure the utilities demanded by the public. It is the amount that will secure an equilibrium between demand and supply. Increments and profits of every kind enjoyed by the company must necessarily be considered a part of the total compensation that the company receives from the public. In so far as there are increments and profits arising from increase in land values, it is clear that such increments and profits should in a rate proceeding be considered either as income or as an offset in fixing the rate of return. Any apparent advantage secured by the company under the reproduction method is in a measure counterbalanced. The reproduction method as thus applied is therefore a roundabout method of accomplishing what can be more simply and effectively accomplished by basing the rate of

return on the actual capital cost. This does away with the necessity of accounting for appreciation or reducing the nominal rate of return.

Most of the objections to the adoption of *any* standard of value arise from a consideration of the numerous difficulties and complexities created by the case of poorly located and unsuccessful enterprises. It is apparent that in such cases rates must be fixed without much regard to cost of production. Rates in such cases must be largely based on a fair judgment of the value of the service to the consumer. In such cases the existing property has little or nothing to do with the estimate. The entire problem is approached from the standpoint of what is fair to the consumer. It is recognized that a rate which would fairly compensate the company from the standpoint of its outlay is improper, as such rate would be higher than the consumer could justly be called upon to pay. Such cases are not, properly speaking, cases for valuation at all. They are cases in which the rates must be determined largely without regard to what is normally meant by value for rate purposes. It is true that no standard of rate-making can be adopted for such cases. The usual procedure is to determine actual cost, reproduction cost, accrued depreciation, capitalization, and perhaps other factors, and then to fix an amount as fair value which at the rate of return determined upon will permit of the rate which seems to correspond to the fair value of the service. The reasoning here is somewhat circular. The fair rate of charge must be first determined and then a fair value and fair rate of return that will seem to justify the rate of charge already determined upon. In considering a normal standard of fair value for rate purposes the abnormal case of the poorly located, unsuccessful, or partially obsolete enterprise should be excluded. Such abnormal enterprises must necessarily be put in a class by themselves in considering rate and valuation problems. If the discussion is limited to the normally located and successful enterprise it is clear that a controlling standard for the determination of fair value can and should be developed. It is essential that the relations between the company and the public be put on a more permanent and dependable basis. In justice both to the company and to the public the determination of this important matter should not be left wholly to the judgment or predilection of the court in each particular case.

Most judges and individuals as well, whether consciously or not, use some standard as actually controlling. They may test their judgment of reproduction cost by actual cost, or they may test their judgment as to normal actual cost by reproduction cost, but in either event it is one or the other of these standards that is actually controlling.

The determination of a standard of value applicable to existing investments will be worked out if at all by the slow and piecemeal process of court decision in numerous cases. The final answer can only be given by the Supreme Court of the United States. It would seem, however, that as to the future, legislative bodies and commissions might at once adopt a standard. This standard would apply to future investments and to future fluctuations in existing investments. If normal actual capital cost were adopted as the rule for the future, accounting methods and rate regulation would be much simplified and the relations between the utilities and the public placed on a much more equitable and dependable basis. The adoption of this as the normal standard for appropriately located and successful enterprises would not mean that exceptional efficiency shown in the construction or operation of an enterprise could not be properly rewarded, or, on the other hand, that exceptional inefficiency could not be penalized. Such reward or penalty, however, is more properly reflected in the rate of return allowed.

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